

FIG. 1

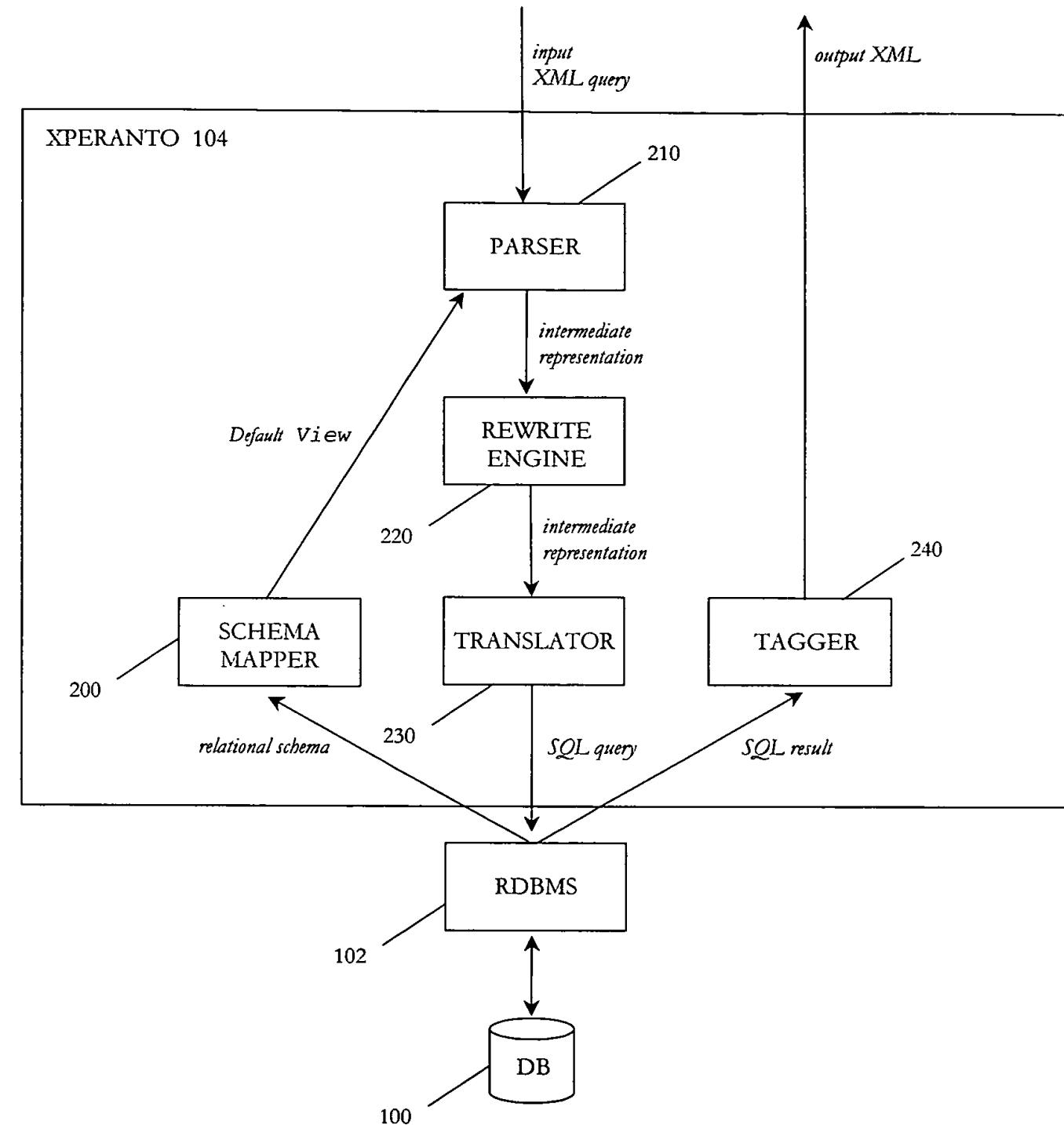


FIG. 2

DEPT TABLE 300

DNO	NAME	SIZE
1	Finance	100
2	Marketing	200
3	Sales	50
...		

EMP TABLE 310

DNO	ENO	NAME	AGE
1	1	J. Skolem	50
2	2	L. Hubbard	33
...			

Default XML View of the DEPT Table 320

```
<DEPT>
  <ROW>
    <DNO> 1 </DNO> <NAME> Finance </NAME> <SIZE> 100 </SIZE>
  </ROW>
  <ROW>
    <DNO> 2 </DNO> <NAME> Marketing </NAME> <SIZE> 200 </SIZE>
  </ROW>
  <ROW>
    <DNO> 3 </DNO> <NAME> Sales </NAME> <SIZE> 50 </SIZE>
  </ROW>
  ...
</DEPT>
```

Default XML View of the EMP Table 330

```
<EMP>
  <ROW>
    <DNO> 1 </DNO> <ENO> 1 </ENO> <NAME> J. Skolem </NAME> <AGE> 50 </AGE>
  </ROW>
  <ROW>
    <DNO> 2 </DNO> <ENO> 2 </ENO> <NAME> L. Hubbard </NAME> <AGE> 33 </AGE>
  </ROW>
  ...
</EMP>
```

FIG. 3

Query Over the Default View

```
WHERE
<DEPT>
  <ROW>
    <DNO> $DNO </DNO> <NAME> $DNAME </NAME>
    <SIZE> $DSIZE </SIZE>
  </ROW>
</DEPT> IN DefaultView,
$DSIZE > 75
CONSTRUCT
<BIGDEPT>
  <NAME> $DNAME </NAME>
  <SIZE> $DSIZE </SIZE>
{WHERE
  <EMP>
    <ROW> <DNO> $DNO </DNO> <NAME> $ENAME </NAME> </ROW>
  </EMP> IN DefaultView
CONSTRUCT
  <EMP> <NAME> $ENAME </NAME> </EMP>}
</BIGDEPT>
```

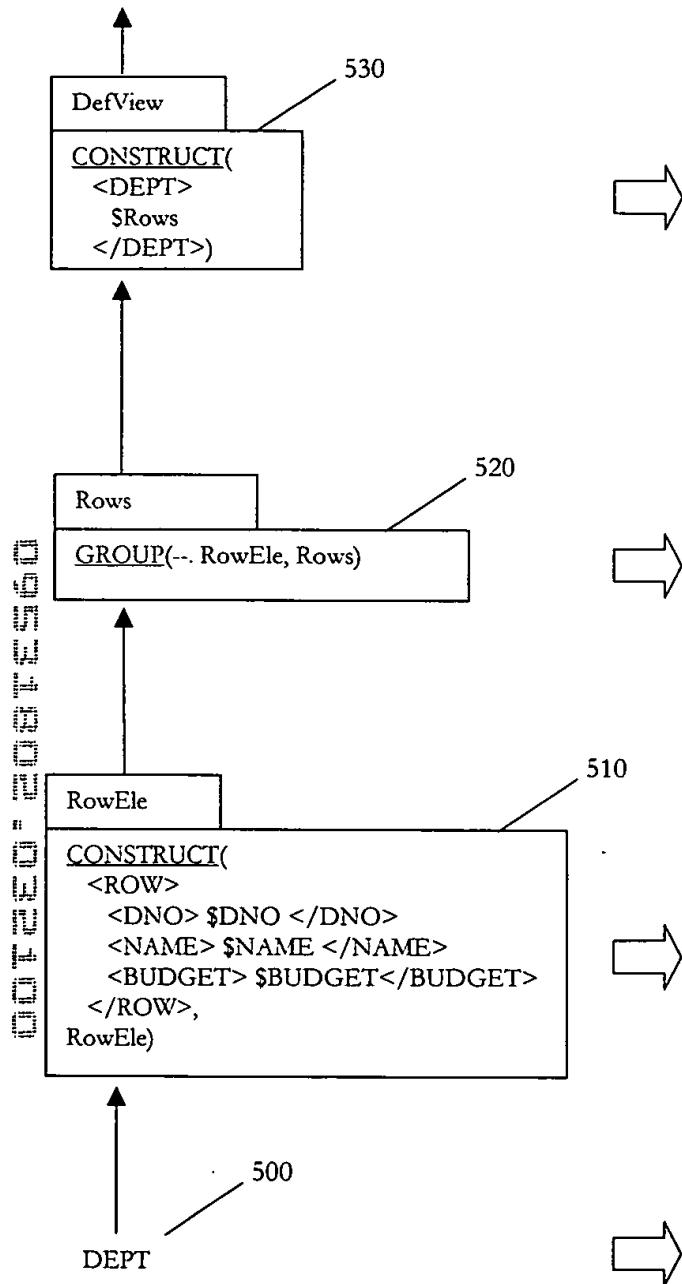
XML Produced by the Query

```
<BIGDEPT>
  <NAME> Finance </NAME>
  <SIZE> 100 </SIZE >
  <EMP> <NAME> J. Skolem </NAME> </EMP>
  ...
</BIGDEPT>
<BIGDEPT>
  <NAME> Marketing </NAME>
  <SIZE> 200 </SIZE >
  <EMP> <NAME> L. Hubbard </NAME> </EMP>
  ...
</BIGDEPT>
...
```

FIG. 4

Intermediate Representation for the Default View of the DEPT Table

Output of Each Operation



<DEPT>

<ROW>

<DNO> 1 </DNO> <NAME> Finance </NAME>

<SIZE> 100 </SIZE>

</ROW>

<ROW>

<DNO> 2 </DNO> <NAME> Marketing </NAME>

<SIZE> 200 </SIZE>

</ROW>

...

</DEPT>

<ROW>

<DNO> 1 </DNO> <NAME> Finance </NAME>

<SIZE> 100 </SIZE>

</ROW>

<ROW>

<DNO> 2 </DNO> <NAME> Marketing </NAME>

<SIZE> 200 </SIZE>

</ROW>

...

<ROW>

<DNO> 1 </DNO> <NAME> Finance </NAME>

<SIZE> 100 </SIZE>

</ROW>

<ROW>

<DNO> 2 </DNO> <NAME> Marketing </NAME>

<SIZE> 200 </SIZE>

</ROW>

...

1 Finance 100

2 Marketing 200

...

FIG. 5

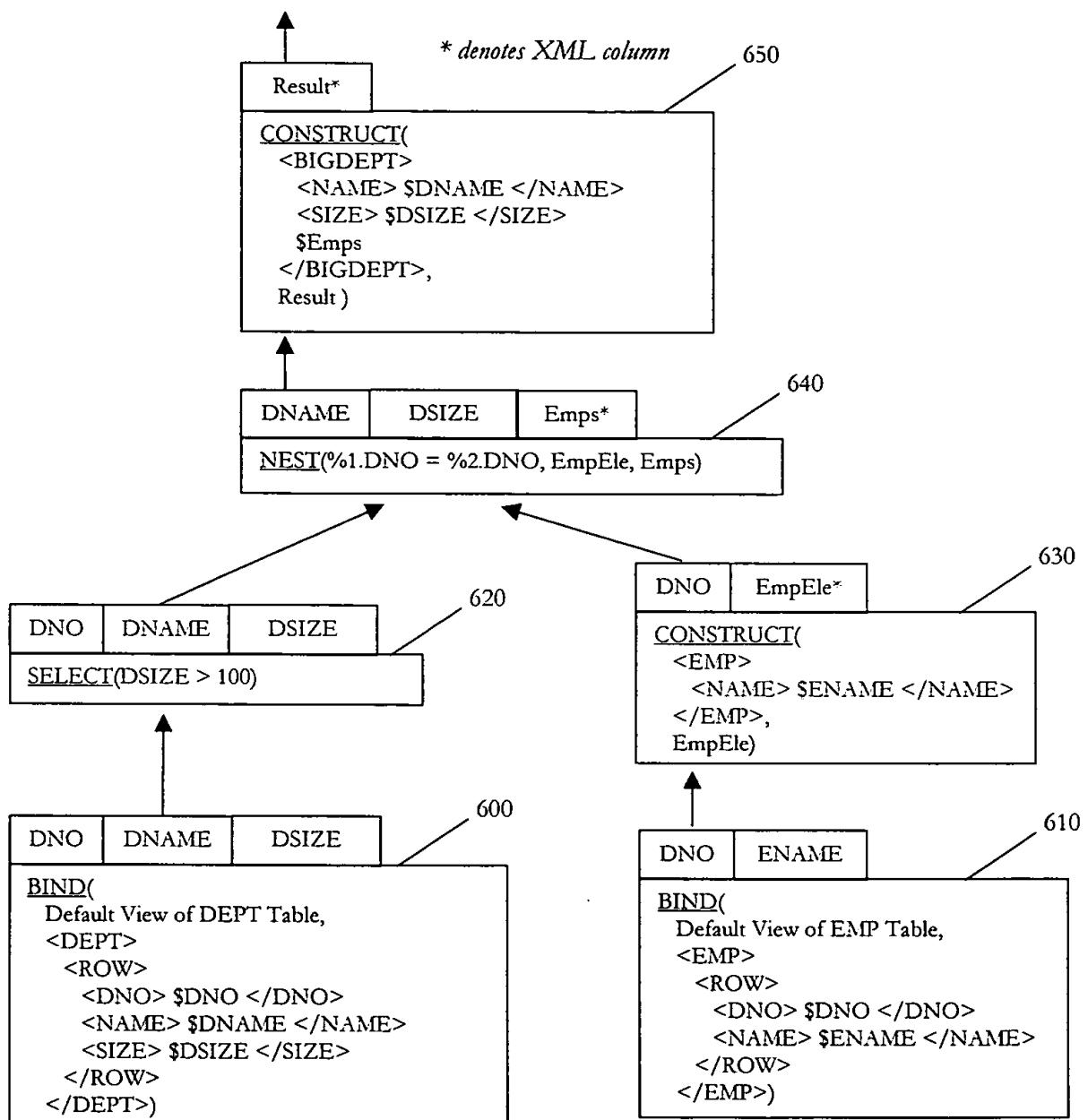


FIG. 6

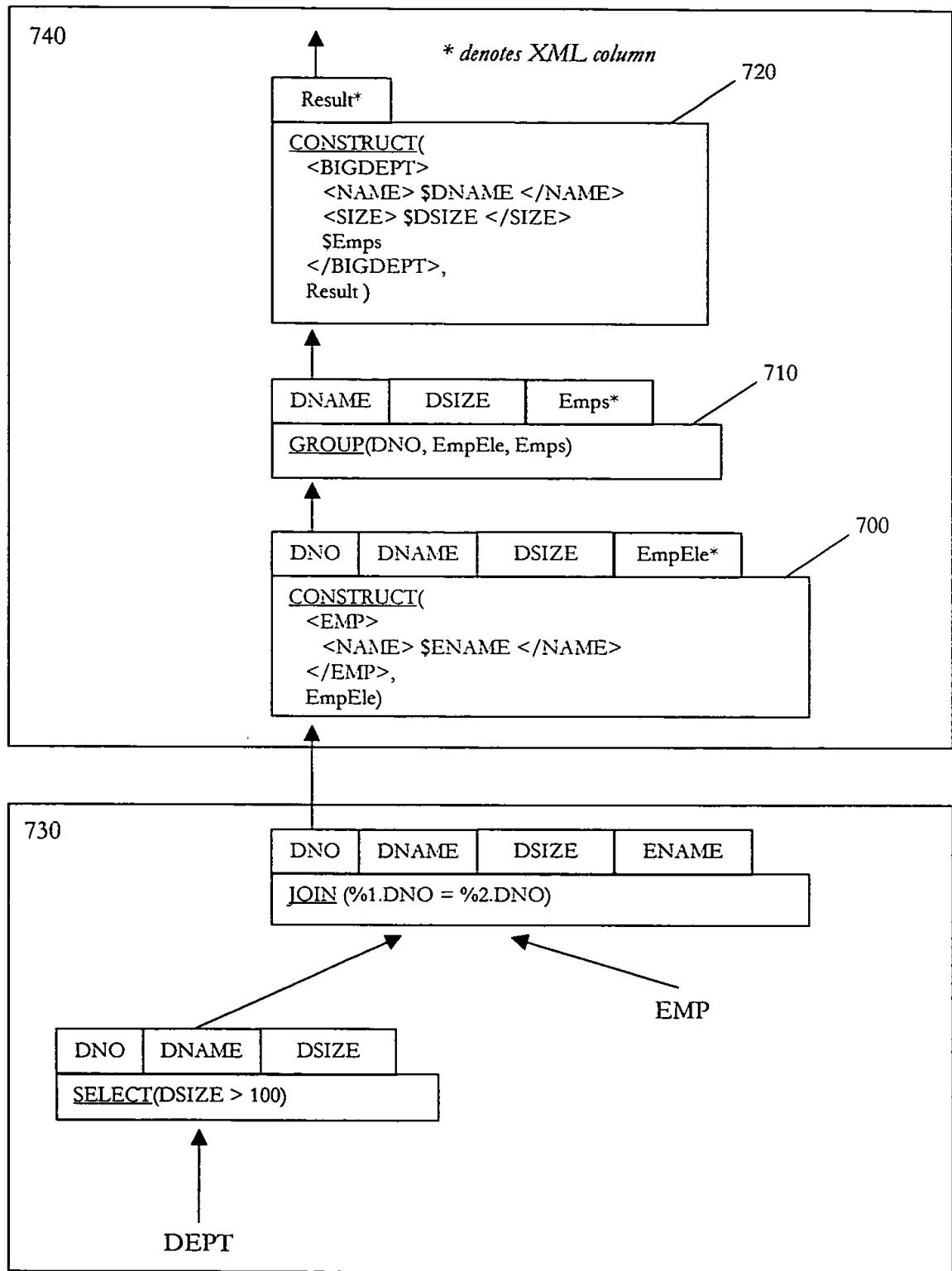


FIG. 7

DRAFTED = RECORDED

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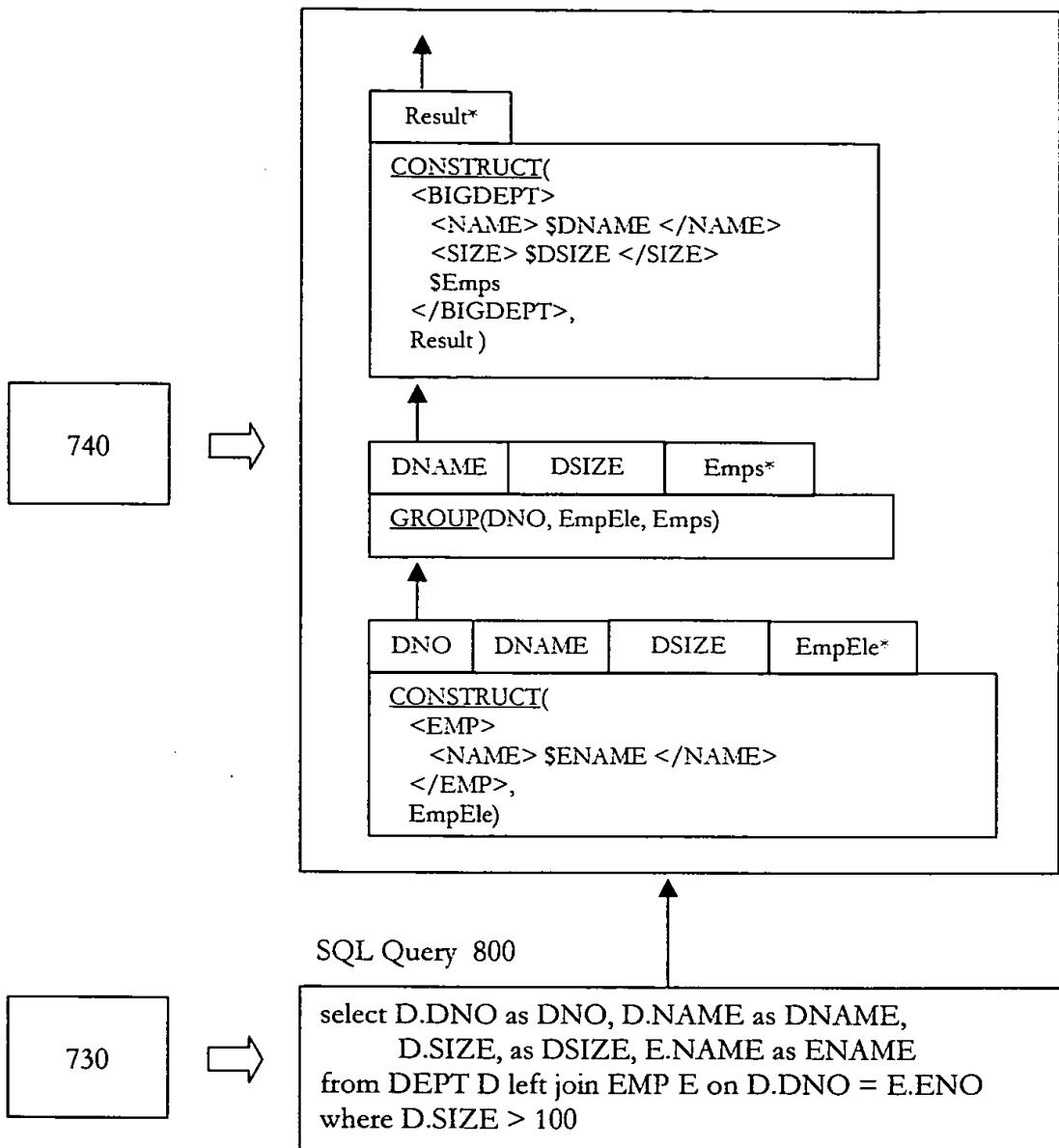


FIG. 8

001200-00000000

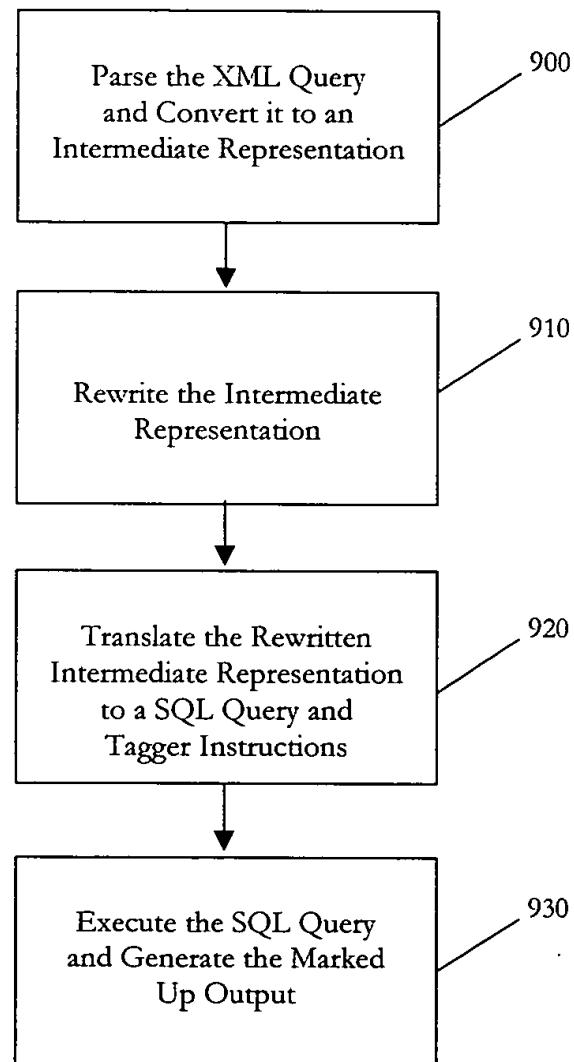


FIG. 9